Carestream

SAFETY DATA SHEET

Issuing Date 10/16/2017 **Revision Date** 10/16/2017 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name: RP X-OMAT Developer and Replenisher, Part A

Product Code(s) 5239322A

Supplier Carestream Health, Inc., 150 Verona Street, Rochester, NY, USA 14608

Emergency telephone number
CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

For other information contact: 800-328-2910

Recommended Use Restricted to professional users. Photographic chemical.

2. HAZARDS IDENTIFICATION

Classification

Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Emergency Overview

Signal word **Danger**

Hazard statements
Causes serious eye damage
May cause an allergic skin reaction
Suspected of causing genetic defects
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure (blood, liver)

Appearance Liquid, light yellow **Physical state** liquid **Odor** Odorless

Precautionary Statements - Prevention
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statement - Response
Contaminated work clothing should not be allowed our of the workplace. IF exposed or concerned: Get medical advice/attention.
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Skin
IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Precautionary Statement - Storage
Store locked up.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)
• May be harmful if swallowed

Other hazards which do not result in classification
Very toxic to aquatic life.

1.1% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%	Trade Secret
Hydroquinone 123-31-9	123-31-9	5 - 10	*
Diethylene glycol 111-46-6	111-46-6	1 - 5	*

*The exact percentages (concentrations) have been withheld as trade secrets.

4. FIRST AID MEASURES

First Aid Measures

General advice — Immediate medical attention is required. Show this material safety data sheet to the doctor in attendance.

Eye contact — Immediate medical attention is required. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.

Skin contact — Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Inhalation — IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. If not breathing, give artificial respiration. Immediate medical attention is required.

Ingestion — Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms and effects, both acute and delayed

Main Symptoms — Causes eye burns. May cause an allergic skin reaction. Irritation. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water spray. Carbon dioxide (CO_2). Alcohol-resistant foam. Dry chemical.

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous combustion products
Carbon oxides. Sulfur oxides.

Explosion data
Sensitivity to Mechanical Impact Not applicable.
Sensitivity to Static Discharge Not applicable.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions For personal protection see section 8. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Other information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Wash thoroughly after handling. Wear personal protective equipment. Handle in accordance with good industrial hygiene and safety practice. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible products Strong oxidizing agents. Acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical name	ACGIH TLV	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs	OSHA PEL	Advisory OEL
Hydroquinone 123-31-9	TWA: 1 mg/m³		TWA: 2 mg/m³	
Diethylene glycol 111-46-6	-	TWA: 10 mg/m³	-	
Sodium borate 1330-43-4	STEL 6 mg/m³ TWA: 2 mg/m³		-	

Appropriate engineering controls

Engineering Measures Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Ensure that eyewash stations and safety showers are close to the workstation location.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin and body protection Long sleeved clothing. Protective gloves. Skin contact should be prevented through use of suitable protective clothing, gloves, and footwear, selected with regard of use conditions and exposure potential.

Respiratory protection None required under normal usage. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid		
Appearance	Liquid, light yellow	**Odor**	Odorless
Color	light yellow	**Odor threshold**	No information available

Property	Values	Remarks • Method
pH	11.4	
Melting point / freezing point		No information available
Boiling point / boiling range	> 100 °C	No information available
Flash point	> 93.3 °C > 200 °F	Seta closed cup.
Evaporation rate		No information available
Flammability (solid, gas)	no data available	
Upper flammability limit:	Unknown	
Lower flammability limit:	Not flammable	
Vapor pressure	24 mbar @ 20 °C	No information available
Vapor density	0.6	No information available
Specific Gravity		No information available
Water solubility	completely soluble	No information available

Solubility(ies)		No information available
Partition coefficient		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Oxidizing Properties	No information available	
Explosive properties	No information available	

Other information

Softening point	No information available
Molecular weight	No information available
Liquid Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
Not applicable.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Contact with strong acids liberates sulfur dioxide.

Conditions to Avoid
Heat, flames and sparks.

Incompatible Materials
Strong oxidizing agents. Acids.

Hazardous decomposition products
Carbon oxides, Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation of respiratory tract. Expected to be a low hazard for recommended handling.
Eye contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	May cause sensitization by skin contact. May cause skin irritation and/or dermatitis.
Ingestion	May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Toxicology data for the components

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Hydroquinone 123-31-9	375 mg/kg (Rat) Oral LD50 Rat 375 mg/kg (Source: ECHA)	> 4800 mg/kg (Rat)	-

Diethylene glycol 111-46-6	12565 mg/kg (Rat)	11890 mg/kg (Rabbit)	-

Information on toxicological effects

Symptoms Causes severe eye damage. Allergic skin reactions including rash, dermatitis, irritation, and itching.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause skin irritation and/or dermatitis.
Serious eye damage/eye irritation Risk of serious damage to eyes. Irritating to eyes.
Corrosivity Risk of serious damage to eyes.
Sensitization May cause sensitization by skin contact.
Mutagenic effects Contains a known or suspected mutagen.
Carcinogenicity Contains a known or suspected carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Hydroquinone 123-31-9	A3			

ACGIH: (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

Reproductive toxicity Contains ingredients that are suspected reproductive hazards. However, based on available data the product should not be classified for reproductive effects.
STOT - single exposure The substance or mixture is not classified as specific target organ toxicant, single exposure
STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure, See listed target organs below
Chronic toxicity Effects expected to be similar to those seen acutely. Avoid repeated exposure. Possible risks of irreversible effects.
Target Organ Effects Skin, Eyes, Respiratory system, Central nervous system, Kidney, Liver.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 1.1% of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 2772 mg/kg
ATEmix (dermal) 8425 mg/kg ppm
ATEmix (inhalation-dust/mist) 81.4 mg/L mg/kg (rat)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life

0.19% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Hydroquinone 123-31-9	0.335: 72 h Pseudokirchneriella subcapitata mg/L EC50 13.5: 120 h Desmodesmus subspicatus mg/L EC50	0.1 - 0.18: 96 h Pimephales promelas mg/L LC50 static 0.044: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.044: 96 h Pimephales promelas mg/L LC50 flow-through 0.17: 96 h Brachydanio rerio mg/L LC50		0.29: 48 h Daphnia magna mg/L EC50
Diethylene glycol 111-46-6		75200: 96 h Pimephales promelas mg/L LC50 flow-through		84000: 48 h Daphnia magna mg/L EC50

Persistence and degradability
No data is available on the product itself. Expected to be readily biodegradable.

Bioaccumulation:
No information available.

Chemical name	log Pow
Hydroquinone 123-31-9	0.5
Diethylene glycol 111-46-6	-1.98

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods Should not be released into the environment. Dispose of in accordance with local regulations.

Contaminated packaging Do not re-use empty containers. Dispose of in accordance with local regulations.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

DOT Not regulated (If shipped in NON BULK packaging by ground transport) Per 171.4(C) of Title 49CFR

TDG 1.45.1 Marine Pollutants Exemption for non Bulk by ground shipments

IATA Not regulated
Special Provisions A197

IMDG
Special Provisions 969

The "environmentally hazardous substances (UN3082 and UN3077) shipped in Limited Quantities (net quantity of less than 5 L or 5 kg) are deemed "Not Restricted" (not regulated) for DGR.

For transportation information, go to: http://ship.carestream.com

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Complies
IECSC Complies
KECL Complies

PICCS	Complies
AICS	Complies
NZIoC	Complies

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	SARA 313 - Threshold Values %
Hydroquinone - 123-31-9	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical name	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Hydroquinone - 123-31-9		Group I		
Diethylene glycol - 111-46-6		Group I		

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Product RQ
Hydroquinone	100 lb	100 lb	

TSCA

Component	U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances
Hydroquinone 123-31-9 (5 - 10)	10/04/1984

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island

Hydroquinone	X	X	X	X	X
Diethylene glycol			X		X
Sodium borate	X		X		

International Regulations

Mexico - Grade Serious risk, Grade 3

Chemical name	Carcinogen Status	Exposure Limits
Sodium borate		Mexico: TWA 1 mg/m^3

16. OTHER INFORMATION

NFPA	**Health Hazard** 3	**Flammability** 1	**Instability** -
HMIS	**Health Hazard** 3	**Flammability** 1	**Physical Hazard** 0

Revision Date 10/16/2017
Revision Note (M)SDS sections updated
Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

Carestream

SAFETY DATA SHEET

Issuing Date 10/16/2017 **Revision Date** 10/16/2017 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name: RP X-OMAT Developer and Replenisher, Part B

Product Code(s) 5239322B

Supplier Carestream Health, Inc., 150 Verona Street, Rochester, NY, USA 14608

Emergency telephone number
CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

For other information contact: 800-328-2910

Recommended Use Photographic chemical. Restricted to professional users.

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

Label elements

Emergency Overview

Signal word **Danger**

Hazard statements
Harmful in contact with skin
Causes severe skin burns and eye damage

Contains Acetic acid

Appearance Orange aqueous solution **Physical state** liquid **Odor** Pungent

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin plenty of water and soap. If you feel unwell, are exposed, or concern about exposure: Contact your doctor and get medical attention. Wash contaminated clothing before reuse.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

Ingestion

IF SWALLOWED: Rinse mouth.

Precautionary Statement - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

• May be harmful if swallowed

Other hazards which do not result in classification

Harmful to aquatic life with long lasting effects.

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%	Trade Secret
Acetic acid 64-19-7	64-19-7	65-<70	*

*The exact percentages (concentrations) have been withheld as trade secrets.

4. FIRST AID MEASURES

First Aid Measures

General advice — Immediate medical attention is required. Show this material safety data sheet to the doctor in attendance.

Eye contact — Immediate medical attention is required. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.

Skin contact — Immediate medical attention is required. Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Wash contaminated clothing before reuse.

Inhalation — IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediate medical attention is required. Administer oxygen if breathing is difficult. If not breathing, give artificial respiration.

Ingestion — Immediate medical attention is required. Rinse mouth. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.

Protection of First-aiders — Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Most important symptoms and effects, both acute and delayed

Main Symptoms — CORROSIVE. Burning. Coughing and/ or wheezing. Difficulty breathing. respiratory distress. Causes eye burns.

Indication of any immediate medical attention and special treatment needed

Notes to physician Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
The product is not flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products
Hazardous decomposition products due to incomplete combustion: Carbon oxides, Hydrocarbons, Aldehydes.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection see section 8.

Other information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills.

Methods for cleaning up Clean contaminated surface thoroughly. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear personal protective equipment. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Keep container tightly closed.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible products Amines. Metals. Bases. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical name	ACGIH TLV	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs	OSHA PEL	Advisory OEL
Acetic acid 64-19-7	STEL 15 ppm TWA: 10 ppm		TWA: 10 ppm TWA: 25 mg/m^3	
3-Pyrazolidinone, 1-phenyl- 92-43-3	-		-	EK HPG 0.2 mg/m^3 TWA

Appropriate engineering controls

Engineering Measures Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin and body protection Impervious clothing. Impervious gloves. Skin contact should be prevented through use of suitable protective clothing, gloves, and footwear, selected with regard of use conditions and exposure potential.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid
Appearance Orange aqueous solution
Color orange
Odor Pungent
Odor threshold No information available

Property	Values	Remarks • Method
pH	0.6	
Melting point / freezing point		No information available
Boiling point / boiling range		No information available
Flash point	> 93.4 °C	No information available.
Evaporation rate		No information available
Flammability (solid, gas)	no data available	
Upper flammability limit:	Unknown	
Lower flammability limit:	Not flammable	
Vapor pressure		No information available
Vapor density		No information available

Specific Gravity	1.085	No information available
Water solubility	completely soluble	No information available
Solubility(ies)		No information available
Partition coefficient		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Oxidizing Properties	No information available	
Explosive properties	No information available	

Other information

Softening point		No information available
Molecular weight		No information available
Liquid Density	g/cm3	No information available
Bulk density		No information available

10. STABILITY AND REACTIVITY

Reactivity
None under normal use conditions.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to Avoid
Exposure to air or moisture over prolonged periods. Heat, flames and sparks.

Incompatible Materials
Amines. Metals. Bases. Strong oxidizing agents.

Hazardous decomposition products
Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides. Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate.
Eye contact	Corrosive to the eyes and may cause severe damage including blindness.
Skin contact	Causes burns. Harmful in contact with skin.
Ingestion	Ingestion causes burns of the upper digestive and respiratory tracts. Can burn mouth, throat, and stomach. May be harmful if swallowed.

Toxicology data for the components

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Acetic acid 64-19-7	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h Inhalation LC50 Rat 11.4 mg/L 4 h (Source: NLM_CIP)

Information on toxicological effects

Symptoms Causes burns. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Causes severe eye damage.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes burns.
Serious eye damage/eye irritation Causes burns. Corrosive to the eyes and may cause severe damage including blindness.
Corrosivity Risk of serious damage to eyes. Causes burns.
Sensitization May cause sensitization of susceptible persons.
Mutagenic effects No information available.
Carcinogenicity Contains no ingredients above reportable quantities listed as a carcinogen.

Reproductive toxicity Contains ingredients that are suspected reproductive hazards.
STOT - single exposure The substance or mixture is not classified as specific target organ toxicant, single exposure
STOT - repeated exposure The substance or mixture is not classified as specific target organ toxicant, repeat exposure
Chronic toxicity Avoid repeated exposure. Possible risks of irreversible effects. Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Contains a known or suspected reproductive toxin.
Target Organ Effects Respiratory system, Eyes, Skin, Teeth, Blood, Testes, Gastrointestinal tract (GI).
Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 2274 mg/kg
ATEmix (dermal) 1594 mg/kg
ATEmix (inhalation-dust/mist) 17.1 mg/L
ATEmix (inhalation-vapor) 17.3

12. ECOLOGICAL INFORMATION

Ecotoxicity

May cause long lasting harmful effects to aquatic life

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Acetic acid 64-19-7		79: 96 h Pimephales promelas mg/L LC50 static 75: 96 h Lepomis macrochirus mg/L LC50 static		65: 48 h Daphnia magna mg/L EC50 Static 47: 24 h Daphnia magna mg/L EC50

Persistence and degradability

.

Bioaccumulation:

No information available.

Chemical name	log Pow
Acetic acid 64-19-7	-0.31

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods Dispose of in accordance with local regulations. Should not be released into the environment. This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated packaging Do not re-use empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Acetic acid 64-19-7	Toxic Corrosive Ignitable

14. TRANSPORT INFORMATION

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

DOT

UN Number	UN2790
Proper Shipping Name	Acetic acid solution
Hazard class	8
Packing Group	II
Special Provisions	A3, A6, A7, A10, B2, IB2, T7, TP2
Emergency Response Guide Number	153
Description	UN2790, Acetic acid solution, 8, PG II, Limited Quantity

TDG

UN Number	UN2790
Proper Shipping Name	Acetic acid solution
Hazard class	8
Packing Group	II
Description	UN2790, Acetic acid solution, 8, PG II, Limited Quantity

IATA

UN Number	UN2790
Proper Shipping Name	Acetic acid solution
Hazard class	8
Packing Group	II
ERG Code	8L
Description	UN2790, Acetic acid solution, 8, PG II

IMDG

UN Number	UN2790
Proper Shipping Name	Acetic acid, solution

Hazard class	8
Packing Group	II
EmS-No.	F-A, S-B
Description	UN2790, Acetic acid solution, 8, PG II, Limited Quantity

For transportation information, go to: http://ship.carestream.com

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
NZIoC	Complies

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Acetic acid	5000 lb			X

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

Chemical name	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Acetic acid - 64-19-7		Group II		

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive

Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Product RQ
Acetic acid	5000 lb		

TSCA
This product does not contain any chemicals regulated under TSCA Section 4, Section 5(a), Section 8(a) or Section 8(d).

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Acetic acid	X	X	X		X

International Regulations

Mexico - Grade Serious risk, Grade 3

Chemical name	Carcinogen Status	Exposure Limits
Acetic acid		Mexico: TWA 10 ppm Mexico: TWA 25 mg/m^3 Mexico: STEL 15 ppm Mexico: STEL 37 mg/m^3

16. OTHER INFORMATION

NFPA	**Health Hazard** 3	**Flammability** 1	**Instability** -
HMIS	**Health Hazard** 3	**Flammability** 1	**Physical Hazard** 0

Revision Date 10/16/2017
Revision Note (M)SDS sections updated
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Carestream

SAFETY DATA SHEET

Issuing Date 10/24/2017 **Revision Date** 10/24/2017 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name: RP X-OMAT Developer and Replenisher, Part C

Product Code(s) 5239322C

Supplier Carestream Health, Inc., 150 Verona Street, Rochester, NY, USA 14608

Emergency telephone number
CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

For other information contact: 800-328-2910

Recommended Use Photographic chemical.

2. HAZARDS IDENTIFICATION

Classification

Acute Toxicity - Oral	Category 4
Acute toxicity - Inhalation (Vapors)	Category 2
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Respiratory Sensitization	Sub-category 1A
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Corrosive to metals	Category 1

Label elements

Emergency Overview

Signal word **Danger**

Hazard statements
Harmful if swallowed
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Fatal if inhaled
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause respiratory irritation
May be corrosive to metals.
May be corrosive to metals

Contains Glutaraldehyde, Acetic acid
Appearance aqueous solution **Physical state** liquid **Odor** Aldehydes

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Use only in a well-ventilated area. Keep only in original container. Do not eat, drink or smoke when using this product.

Precautionary Statement - Response
Immediately call a POISON CENTER or doctor/physician.
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes.
Skin
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin plenty of water and soap. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.
Spill
Absorb spillage to prevent material damage.

Precautionary Statement - Storage
Store locked up. Store in corrosive resistant container with a resistant inliner. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)
• May be harmful if absorbed through skin

Other hazards which do not result in classification
Very toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%	Trade Secret
Glutaraldehyde 111-30-8	111-30-8	40-50	*
Acetic acid 64-19-7	64-19-7	5-<10	*

*The exact percentages (concentrations) have been withheld as trade secrets.

4. FIRST AID MEASURES

First Aid Measures

General advice Immediate medical attention is required. Show this material safety data sheet to the doctor in attendance.

Eye contact Immediate medical attention is required. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.

Skin contact Immediate medical attention is required. Wash off immediately with soap and plenty of

	water for at least 15 minutes while removing all contaminated clothing and shoes. Wash contaminated clothing before reuse.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediate medical attention is required. Administer oxygen if breathing is difficult. If not breathing, give artificial respiration.
Ingestion	Immediate medical attention is required. Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Most important symptoms and effects, both acute and delayed

Main Symptoms	CORROSIVE. Burning. Coughing and/ or wheezing. Difficulty breathing. respiratory distress. Causes eye burns. Asthma-like and/ or skin allergy-like symptoms. Irritation. Rashes. Hives.

Indication of any immediate medical attention and special treatment needed

Notes to physician	May cause sensitization of susceptible persons. Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use CO2, dry chemical, or foam.

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. May form peroxides of unknown stability. Do not allow evaporation to dryness. May cause spontaneous heating and ignition when absorbed on combustible, porous material (e.g. rags, paper, sawdust, cotton, clothing).

Hazardous combustion products
Carbon oxides.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection see section 8.
Other information	Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills.

Methods for cleaning up Clean contaminated surface thoroughly. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wear personal protective equipment. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible products Bases. Strong oxidizing agents. Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical name	ACGIH TLV	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs	OSHA PEL	Advisory OEL
Glutaraldehyde 111-30-8	Ceiling: 0.05 ppm		-	NIOSH REL: 0.2 ppm Ceiling
Acetic acid 64-19-7	STEL 15 ppm TWA: 10 ppm		TWA: 10 ppm TWA: 25 mg/m^3	

Appropriate engineering controls

Engineering Measures Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin and body protection Impervious clothing. Impervious gloves. Skin contact should be prevented through use of suitable protective clothing, gloves, and footwear, selected with regard of use conditions and exposure potential.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid		
Appearance	aqueous solution	**Odor**	Aldehydes
Color	yellow - green	**Odor threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	2.3	
Melting point / freezing point		No information available
Boiling point / boiling range	> 100 °C	No information available
Flash point	> 93.600 °C	No information available.
Evaporation rate		No information available
Flammability (solid, gas)	no data available	
Upper flammability limit:	Unknown	
Lower flammability limit:	Not flammable	
Vapor pressure	24 mbar @ 20 °C	No information available
Vapor density	1.8	No information available
Specific Gravity	1.116	No information available
Water solubility	completely soluble	No information available
Solubility(ies)		No information available
Partition coefficient		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Oxidizing Properties	No information available	
Explosive properties	No information available	

Other information

Softening point		No information available
Molecular weight		Not applicable
Liquid Density	g/cm3	No information available
Bulk density		No information available

10. STABILITY AND REACTIVITY

Reactivity
None under normal use conditions.

Chemical stability
Stable under normal conditions. May form explosive peroxides.

Possibility of hazardous reactions
May form explosive peroxides.

Conditions to Avoid
Exposure to air or moisture over prolonged periods. Do not allow evaporation to dryness.

Incompatible Materials
Bases. Strong oxidizing agents. Metals.

Hazardous decomposition products
Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides. Nitrogen oxides (NOx). Aldehydes.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Very toxic by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Toxic by inhalation. Harmful by inhalation. May cause sensitization by inhalation. May cause drowsiness and dizziness.

Eye contact Corrosive to the eyes and may cause severe damage including blindness.

Skin contact Causes burns. Harmful in contact with skin. May be harmful if swallowed of absorbed through skin. May cause sensitization by skin contact.

Ingestion Toxic if swallowed. Ingestion causes burns of the upper digestive and respiratory tracts. Can burn mouth, throat, and stomach.

Toxicology data for the components

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Glutaraldehyde 111-30-8	154 mg/kg (Rat)	1749 mg/kg (Rat) (50% glutaraldehyde in water)	0.28 - 0.39 mg/L (4hr Rat) (an aerosol was tested)
Acetic acid 64-19-7	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h Inhalation LC50 Rat 11.4 mg/L 4 h (Source: NLM_CIP)

Information on toxicological effects

Symptoms Causes burns. Allergic skin reactions including rash, dermatitis, irritation, and itching.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Corrosivity Risk of serious damage to eyes. Causes burns.
Sensitization May cause sensitization by skin contact. May cause sensitization by inhalation.
Mutagenic effects No information available.
Carcinogenicity Contains no ingredients above reportable quantities listed as a carcinogen.

Reproductive toxicity No information available.
STOT - single exposure The substance or mixture is not classified as specific target organ toxicant, single exposure
STOT - repeated exposure The substance or mixture is not classified as specific target organ toxicant, repeat exposure
Chronic toxicity Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risks of irreversible effects.
Target Organ Effects Eyes, Skin, Respiratory system, Teeth, Mucous membrane, Gastrointestinal tract (GI).
Other adverse effects Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity
The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 357 mg/kg
ATEmix (dermal) 2889 mg/kg
ATEmix (inhalation-dust/mist) 0.1 mg/L

ATEmix (inhalation-vapor) 1.1 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants

1.26% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Glutaraldehyde 111-30-8	0.61: 72 h Desmodesmus subspicatus mg/L EC50 0.84: 96 h Desmodesmus subspicatus mg/L EC50	2.6 - 4.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 7.8 - 13: 96 h Oncorhynchus mykiss mg/L LC50 static 7.8 - 22: 96 h Lepomis macrochirus mg/L LC50 static 5.4: 96 h Pimephales promelas mg/L LC50 static		0.56 - 1.0: 48 h Daphnia magna mg/L EC50 Static 14: 48 h Daphnia magna mg/L EC50
Acetic acid 64-19-7		79: 96 h Pimephales promelas mg/L LC50 static 75: 96 h Lepomis macrochirus mg/L LC50 static		65: 48 h Daphnia magna mg/L EC50 Static 47: 24 h Daphnia magna mg/L EC50

Persistence and degradability
Readily biodegradable.

Bioaccumulation:
No information available.

Chemical name	log Pow
Glutaraldehyde 111-30-8	0.22
Acetic acid 64-19-7	-0.31

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods Dispose of in accordance with local regulations. Should not be released into the environment. This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated packaging Do not re-use empty containers. Empty containers may contain flammable or explosive vapours. Do not burn, or use a cutting torch on, the empty drum. Empty containers should be taken to an approved waste handling site for recycling or disposal.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Glutaraldehyde 111-30-8	Toxic
Acetic acid 64-19-7	Toxic Corrosive Ignitable

14. TRANSPORT INFORMATION

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

DOT

UN Number	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde, Acetic acid
Hazard class	8
Packing Group	III
Special Provisions	IB3, T7, TP1, TP28
Emergency Response Guide Number	153
Description	UN3265 , Corrosive liquid, acidic, organic, n.o.s. (Glutaraldehyde , acetic acid) , 8 , III , Limited Quantity

TDG

UN Number	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde, Acetic acid
Hazard class	8
Packing Group	III
Description	UN3265 , Corrosive liquid, acidic, organic, n.o.s. (Glutaraldehyde , acetic acid) , 8 , III , Limited Quantity

IATA

UN Number	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde, Acetic acid
Hazard class	8
Packing Group	III
ERG Code	8L
Special Provisions	A3
Description	UN3265 , Corrosive liquid, acidic, organic, n.o.s. (Glutaraldehyde , acetic acid) , 8 , III , Limited Quantity

IMDG

UN Number	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Technical Name	Glutaraldehyde, Acetic acid
Hazard class	8
Packing Group	III
EmS-No.	F-A, S-B
Special Provisions	223, 274
Description	UN3265 , Corrosive liquid, acidic, organic, n.o.s. (Glutaraldehyde , acetic acid) , 8 , III , Limited Quantity

For transportation information, go to: http://ship.carestream.com

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies

KECL	Complies
PICCS	Complies
AICS	Complies
NZIoC	Complies

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	Yes

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Acetic acid	5000 lb			X

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical name	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Glutaraldehyde - 111-30-8		Group IV		
Acetic acid - 64-19-7		Group II		

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Product RQ
Acetic acid	5000 lb		

TSCA

Chemical name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping
Glutaraldehyde	PAIR: 09/30/1991

Component	U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances
Glutaraldehyde 111-30-8 (40-50)	09/30/1991

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Glutaraldehyde	X	X	X		X
Acetic acid	X	X	X		X

International Regulations

Mexico - Grade Serious risk, Grade 3

Chemical name	Carcinogen Status	Exposure Limits
Glutaraldehyde		Mexico: Ceiling 0.2 ppm Mexico: Ceiling 0.7 mg/m^3
Acetic acid		Mexico: TWA 10 ppm Mexico: TWA 25 mg/m^3 Mexico: STEL 15 ppm Mexico: STEL 37 mg/m^3

16. OTHER INFORMATION

NFPA	**Health Hazard** 3	**Flammability** 1	**Instability** -
HMIS	**Health Hazard** 3	**Flammability** 1	**Physical Hazard** 1

Revision Date 10/24/2017
Revision Note Update to OSHA GHS SDS format
Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Carestream

SAFETY DATA SHEET

Revision Date 04/20/2018 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name: RP X-OMAT Developer and Replenisher, Working solution

Product Code(s) 5239322WS

Supplier Carestream Health, Inc., 150 Verona Street, Rochester, NY, USA 14608

Emergency telephone number
CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

For other information contact: 800-328-2910

Recommended Use Photographic chemical.

2. HAZARDS IDENTIFICATION

Classification

Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 2

Label elements

Emergency Overview

Signal word **Warning**

Hazard statements
Causes serious eye irritation
May cause an allergic skin reaction
Suspected of causing genetic defects
Suspected of causing cancer

Appearance No information available **Physical state** Liquid **Odor** Slight

Precautionary Statements - Prevention
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statement - Response

IF exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/ attention. IF ON SKIN: Wash skin with soap and water.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

Skin

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Precautionary Statement - Storage

Store in a closed container.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

• Not applicable

Other hazards which do not result in classification

Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%	Trade Secret
Water 7732-18-5	7732-18-5	>85	*
Potassium sulfite 10117-38-1	10117-38-1	5-10	*
Hydroquinone 123-31-9	123-31-9	1-3	*
Potassium acetate 127-08-2	127-08-2	1-5	*
1,5-Pentanedisulfonic acid, 1,5-dihydroxy-, dipotassium salt 68310-08-7	68310-08-7	1-5	*
Diethylene glycol 111-46-6	111-46-6	0.1-1	*
Sodium sulfite 7757-83-7	7757-83-7	0.1-1	*
Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt 140-01-2	140-01-2	0.1-1	*
Sodium borate 1330-43-4	1330-43-4	0.1-1	*
Glutaraldehyde 111-30-8	111-30-8	0.1-1	*

*The exact percentages (concentrations) have been withheld as trade secrets.

4. FIRST AID MEASURES

First Aid Measures

General advice Show this safety data sheet to the doctor in attendance. If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary. May cause an allergic skin reaction.

Inhalation Move to fresh air. Consult a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician. IF SWALLOWED: Rinse mouth. Never give anything by mouth to an unconscious person.

Protection of First-aiders Use personal protective equipment.

Most important symptoms and effects, both acute and delayed

Main Symptoms Irritation. May cause an allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Notes to physician May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Cool containers / tanks with water spray. Carbon dioxide (CO_2). Foam. Dry chemical.

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact.

Hazardous combustion products
Hazardous decomposition products due to incomplete combustion.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. For personal protection see section 8. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wear personal protective equipment. Prevent the formation of vapors, mists and aerosols.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep away from direct sunlight. Keep container tightly closed in a dry and well-ventilated place.

Incompatible products Strong acids. Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical name	ACGIH TLV	AIHA - Workplace Environmental Exposure Levels (WEELs) - TWAs	OSHA PEL	Advisory OEL
Hydroquinone 123-31-9	TWA: 1 mg/m³		TWA: 2 mg/m³	
Diethylene glycol 111-46-6	-	TWA: 10 mg/m³	-	
Sodium borate 1330-43-4	STEL 6 mg/m³ TWA: 2 mg/m³		-	
Glutaraldehyde 111-30-8	Ceiling: 0.05 ppm		-	NIOSH REL: 0.2 ppm Ceiling

Appropriate engineering controls

Engineering Measures Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tightly fitting safety goggles. Eyewash equipment and safety shower should be provided in areas of potential exposure.

Skin and body protection Wear protective gloves/clothing. Skin contact should be prevented through use of suitable protective clothing, gloves, and footwear, selected with regard of use conditions and exposure potential.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Remove and wash contaminated clothing before re-use. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid		
Appearance	No information available	**Odor**	Slight
Color	yellow	**Odor threshold**	No information available

Property	**Values**	**Remarks • Method**
pH	10.3	
Melting point / freezing point		No information available
Boiling point / boiling range		No information available
Flash point		Does not flash.
Evaporation rate		No information available
Flammability (solid, gas)	no data available	
Upper flammability limit:	Unknown	
Lower flammability limit:	Not flammable	
Vapor pressure	24 mbar @ 20 °C	No information available
Vapor density	0.6	No information available
Specific Gravity		No information available
Water solubility	completely soluble	No information available
Solubility(ies)		No information available
Partition coefficient		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Oxidizing Properties	No information available	
Explosive properties	No information available	

Other information

Softening point	No information available
Molecular weight	No information available
Liquid Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
Not applicable.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Contact with strong acids liberates sulfur dioxide.

Conditions to Avoid
Incompatible products.

Incompatible Materials
Strong acids. Oxidizing agents.

Hazardous decomposition products
Carbon oxides, Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Expected to be a low hazard for recommended handling. May cause irritation of respiratory tract. Contact with strong acids liberates sulfur dioxide.

Eye contact Irritating to eyes. Avoid contact with eyes.

Skin contact May cause skin irritation and/or dermatitis. Prolonged or repeated contact may dry skin and cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Avoid contact with skin.

Ingestion May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Toxicology data for the components

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	90,000 mg/kg (Rat)	-	-
Potassium sulfite 10117-38-1	>3200 mg/kg (rat)	-	-
Hydroquinone 123-31-9	375 mg/kg (Rat) Oral LD50 Rat 375 mg/kg (Source: ECHA)	> 4800 mg/kg (Rat)	-
Potassium acetate 127-08-2	3250 mg/kg (Rat) Oral LD50 Rat 3250 mg/kg (Source: NLM_CIP)	-	-
Diethylene glycol 111-46-6	12565 mg/kg (Rat)	11890 mg/kg (Rabbit)	4600 mg/m³ (Rat) 4 h Inhalation LC50 Rat >4600 mg/m³ 4 h (aerosol, Source: NICNAS)
Sodium sulfite 7757-83-7	5680 mg/kg (Rat) Oral LD50 Rat 5680 mg/kg (Source: OECD_SIDS)	-	22 mg/L (Rat) 1 h Inhalation LC50 Rat >22 mg/L 1 h (Source: IUCLID)
Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt 140-01-2	> 5000 mg/kg (rat)	> 2000 mg/kg	-
Sodium borate 1330-43-4	2660 mg/kg (Rat) Oral LD50 Rat 2660 mg/kg (Source: JAPAN_GHS)	2000 mg/kg (Rabbit) Dermal LD50 Rabbit >2000 mg/kg (Source: IUCLID)	2 mg/m³ (Rat) 4 h Inhalation LC50 Rat >2 mg/m³ 4 h (Source: HSDB)
Glutaraldehyde 111-30-8	154 mg/kg (Rat)	1749 mg/kg (Rat) (50% glutaraldehyde in water)	0.28 - 0.39 mg/L (4hr Rat) (an aerosol was tested)

Information on toxicological effects

Symptoms Irritant. rash.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause sensitization by skin contact. This mixture contains hydroquinone which is classified as a dermal sensitizer in some jurisdictions. A very similar mixture was negative in dermal sensitization studies with and without prior sensitization to hydroquinone. Based on the results of these studies, this mixture is not expected to present a dermal sensitization hazard to humans.

Mutagenic effects No specific testing was done on this product. Mutagenic testing of the hazardous ingredient in this product has resulted in some positive mutagenic results.

Carcinogenicity Contains a known or suspected carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA

Hydroquinone 123-31-9	A3			

ACGIH: (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

Reproductive toxicity Contains ingredients that are suspected reproductive hazards. However, based on available data the product should not be classified for reproductive effects.

STOT - single exposure No information available

STOT - repeated exposure No information available

Chronic toxicity Effects expected to be similar to those seen acutely. Contains a known or suspected reproductive toxin. Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.

Target Organ Effects Skin, Eyes, Respiratory system, Reproductive system, Central nervous system.

Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 10825 mg/kg ppm mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life Harmful to aquatic life with long lasting effects

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Potassium sulfite 10117-38-1		220 - 460: 96 h Leuciscus idus mg/L LC50 static		
Hydroquinone 123-31-9	0.335: 72 h Pseudokirchneriella subcapitata mg/L EC50 13.5: 120 h Desmodesmus subspicatus mg/L EC50	0.1 - 0.18: 96 h Pimephales promelas mg/L LC50 static 0.044: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.044: 96 h Pimephales promelas mg/L LC50 flow-through 0.17: 96 h Brachydanio rerio mg/L LC50		0.29: 48 h Daphnia magna mg/L EC50
Potassium acetate 127-08-2		6800: 96 h Oncorhynchus mykiss mg/L LC50 semi-static		7170: 24 h Daphnia magna mg/L EC50
Diethylene glycol 111-46-6		75200: 96 h Pimephales promelas mg/L LC50 flow-through		84000: 48 h Daphnia magna mg/L EC50
Sodium sulfite 7757-83-7		220 - 460: 96 h Leuciscus idus mg/L LC50 static		330: 24 h Psammechinus miliaris mg/L LC50
Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt 140-01-2	2.6: 72 h Desmodesmus subspicatus mg/L EC50	1005 - 1250: 96 h Lepomis macrochirus mg/L LC50 static 300: 96 h Pimephales promelas mg/L LC50 static		500: 48 h Daphnia magna mg/L EC50
Sodium borate 1330-43-4	2.6 - 21.8: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 158: 96 h Desmodesmus subspicatus mg/L EC50	340: 96 h Limanda limanda mg/L LC50		1085 - 1402: 48 h Daphnia magna mg/L LC50
Glutaraldehyde 111-30-8	0.61: 72 h Desmodesmus subspicatus mg/L EC50 0.84: 96 h Desmodesmus subspicatus mg/L EC50	2.6 - 4.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 7.8 - 13: 96 h Oncorhynchus mykiss mg/L LC50 static 7.8 - 22: 96		0.56 - 1.0: 48 h Daphnia magna mg/L EC50 Static 14: 48 h Daphnia magna mg/L EC50

		h Lepomis macrochirus mg/L LC50 static 5.4: 96 h Pimephales promelas mg/L LC50 static		

Persistence and degradability
No data is available on the product itself. Expected to be readily biodegradable.

Bioaccumulation:
Most components of this material are unlikely to bioaccumulate but some have not been tested.

Chemical name	log Pow
Hydroquinone 123-31-9	0.5
Diethylene glycol 111-46-6	-1.98
Sodium sulfite 7757-83-7	-4
Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, pentasodium salt 140-01-2	-3.05
Glutaraldehyde 111-30-8	0.22

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods Dispose of in accordance with local regulations. Should not be released into the environment.

Contaminated packaging Do not re-use empty containers. Dispose of in accordance with local regulations.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Glutaraldehyde 111-30-8	Toxic

14. TRANSPORT INFORMATION

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

DOT Not regulated (If shipped in NON BULK packaging by ground transport)

TDG

UN Number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Technical Name	Hydroquinone
Hazard class	9
Packing Group	III

IATA

UN Number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Technical Name	Hydroquinone
Hazard class	9
Packing Group	III

ERG Code	9L
Special Provisions	A97, A158

IMDG

UN Number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Technical Name	Hydroquinone
Hazard class	9
Packing Group	III
EmS-No.	F-A, S-F
Special Provisions	179, 274, 335, 909

For transportation information, go to: http://ship.carestream.com

15. REGULATORY INFORMATION

"Does not comply" indicates a component is either not on the public inventory or is subject to exemption requirements. If additional information is needed contact Carestream Health.

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Does not comply
NZIoC	Complies

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	SARA 313 - Threshold Values %
Hydroquinone - 123-31-9	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21

and 40 CFR 122.42):

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical name	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Hydroquinone - 123-31-9		Group I		
Diethylene glycol - 111-46-6		Group I		
Glutaraldehyde - 111-30-8		Group IV		

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Product RQ
Hydroquinone	100 lb	100 lb	

TSCA

Chemical name	U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping
Glutaraldehyde	PAIR: 09/30/1991

Component	U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances
Hydroquinone 123-31-9 (1-3)	10/04/1984
Glutaraldehyde 111-30-8 (0.1-1)	09/30/1991

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Hydroquinone	X	X	X	X	X
Diethylene glycol			X		X
Sodium borate	X		X		
Glutaraldehyde	X	X	X		X

International Regulations

Mexico - Grade Moderate risk, Grade 2

Chemical name	Carcinogen Status	Exposure Limits
Sodium borate		Mexico: TWA 1 mg/m^3
Glutaraldehyde		Mexico: Ceiling 0.2 ppm Mexico: Ceiling 0.7 mg/m^3

16. OTHER INFORMATION

NFPA	**Health Hazard** 2	**Flammability** 0	**Instability** 0
HMIS	**Health Hazard** 2*	**Flammability** 0	**Physical Hazard** 0

Revision Date 04/20/2018
Revision Note (M)SDS sections updated
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet